

TEACHING THAT MAKES SENSE

Writing Across the Curriculum

*Tips, Tools, and Techniques for
Improving Student Writing in the Content Areas*

by
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by Steve Peha



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You Want Me to Teach Writing Now, Too?

It never ceases to amaze me how much we ask of our teachers. Year after year it seems we pile on yet more work, and typically we do very little to help them cope with the burden of our requests. So it's no wonder that when the phrase "writing across the curriculum" gets bandied about, many middle and high school teachers in the content areas find themselves a bit less than ecstatic at the prospect of adding yet another item to their over-crowded curricular to-do lists. And yet, everything we know about the detailed workings of the human brain and how human beings learn suggests that writing should become the central focus of student work—regardless of which subjects we teach.

In answer to the question that seems to be on every content area teacher's mind these days: No, you don't have to teach writing now, too. Language Arts teachers will continue to take the lead in writing instruction, and by using better techniques like Six Traits criteria-based assessment, Writing Process, and Writer's Workshop, students should be coming into your classes better prepared for the writing work you'll be asking them to do.

But yes, you will have writing work for them to do.

No one is asking you to teach writing *per se*, but you are being asked to include writing as an integral part of your classroom activity, and to use the same system for assessing writing in your classes that Language Arts teachers use in theirs. In the next millennium, writing will be the centerpiece of contemporary practice in every core subject (and this is true in virtually every state in our country). Every student will write, and every teacher will require writing, so we all need to be on the same page as we move forward. And that means that we all need to use the Six Traits, Writing Process, and Writer's Workshop methods to help students become better writers. But this is not as onerous as it may seem. Ultimately, as soon as the majority of teachers begin to adopt this model, things will get easier not harder, as everyone in the system—administrators, parents, students, and teachers as well—begins to reap the huge benefits in efficiency afforded by a more standardized and research-proven approach.

Why Write Across the Curriculum?

What's all the fuss these days about writing across the curriculum? Don't students write enough in Language Arts? Well, in a word: no. At least not enough to meet the demands of the current work world. With the proliferation of e-mail, desktop publishing, and the Internet, writing is now more important than ever. We've realized that we can no longer make distinctions between "writers" and "non-writers." Every student must be able to write—in every subject.¹ Here are five reasons why it is so important that we ask students to write in all subjects.

¹ What we now know is that virtually every student *can* write in virtually every subject. All across the country teachers have been successful at improving student writing. I haven't worked with a school or district yet that hasn't been able to make dramatic progress once a commitment to writing was made and research-proven methods of instruction were adopted by all teachers.

Reason #1: Written output is a great way to assess student knowledge.

Yes, there are many ways students can show us what they know. But writing is the simplest, most direct, most cost-effective, and most time-effective way for students to express their knowledge of a given subject. It is also the simplest way for teachers to make accurate assessments about student learning,² and to get a glimpse of the individual thought processes of a large and diverse classroom population.

Contrary to popular belief, writing isn't something that only "writers" do; writing is a basic skill for getting through life. Yet most American adults are terrified of the prospect—ask a middle-aged engineer to write a report and you'll see something close to panic. Writing, however, isn't a special language that belongs to English teachers and a few other sensitive souls who have a "gift for words." Writing is thinking on paper. Anyone who thinks clearly should be able to write clearly—about any subject at all.

William Zinsser, Writing to Learn

Reason #2: Writing is the essential skill students need as they enter adult life.

Early in life, reading is the essential skill students need. But, having learned to read, having learned to acquire information through print, the emphasis shifts to writing as our society becomes increasingly interested in what people can do with information *after* they have acquired it.

Reading, Math, Social Studies, Science... most of our schooling is concerned with input. It is the mind being crammed full to bursting with the stuff of a "proper" and "complete" education. Writing is output. It clears up confusion and cleans out clutter. It allows students to put their ideas on a page and leave them there to be sorted out with proper deliberation. By teaching students how to write well, by showing them how to focus their intellectual energy in this unique and wonderful way, we give them a key that helps them unlock the complicated ideas and complex emotions we expect them to master as they mature. When we discourage students from writing, either by teaching them poorly or by reducing instruction time, we rob them of one of the best tools they will ever have for making sense of their education and of their lives.

Reason #3: Helping students learn to express themselves with confidence in all subject areas can contribute to improvements in behavior and self-esteem.

There's nothing more frustrating than being a teenager. Remember how it was when you were that age? But often it's not what students are going through that's so hard, it's their inability to make sense of it. I notice a dramatic difference in the attitudes and behaviors of teenagers who write well versus those who don't. Being unable to express oneself is one of the most frustrating feelings a human being can experience. And it is often this frustration that lies at the heart of what drives teenagers to be so rebellious, so depressed, and so difficult to inspire.

² True, assessing writing takes more time than scoring a standardized test, but the information teachers get back from standardized testing is a poor indication of student knowledge and virtually useless as a tool for planning on-going instruction.

Reason #4: Students who write clearly, think clearly. And students who think clearly have a better chance of navigating their way through the obstacles of adolescence.

Because they have confidence in their ability to express themselves with the written word, students who write well don't worry so much about getting their schoolwork done. Their high confidence and low anxiety makes them much easier to teach.

For six long years I always just got by in History and English. I can honestly say I was never taught how to write. I got more red-pen comments than any student in history. Circles, cross-outs, underlines, and the worst one ever: the question mark. This didn't help my writing, it only bruised my ego. Not one teacher ever said to me: "This is what I want to see." They never showed me any examples of good writing that I could learn from. I knew I couldn't write and they knew it, too. But nobody ever tried to change that. There was no such thing as a first or second draft, only the final. I would just turn something in and hope for the best.

Now, I work with a new teacher and he points out all the positives and helps me improve the negatives. He shows me what I'm already doing well and helps me learn how to fix my problems. I actually have a writing process, not just a piece of paper with a million different ideas scattered everywhere.

It feels good when you can turn something in and know people will respond well to it. I was probably always capable of being a good writer, I just needed to be shown the basics—things like sentence fluency, organization, voice, or even word choice. Writing has, in one way or another, helped my whole outlook on school and on my future as well—two things I never really thought about. Things are going great... This year, writing has come more easily to me. Actually, I love it. I'm now able to produce a piece of work that I'm really proud of... My life is on a completely different path than it was a year ago. Actually, it's going in the opposite direction. I love that, too.

Elliot Sun, Wake-Up Call (College Entrance Essay)

Reason #5: Writing is power.

Ultimately, writing is power. It is the power students need to understand and control their lives, to shape their future and define their dreams. Students who do not learn to wield this power will find themselves severely handicapped as they move on from the relative ease of adolescence—and the cozy confines of our protective custody—to confront the immense challenges of adult life. It's up to us as their teachers, to show students what writing can do for them when it is done well.

OK, You Sold Me. Now What Do I Do?

If you've been incorporating writing into your classroom over the years, you may not have to do much at all. Concentrate your efforts on learning how to use the Six Traits criteria and the Writing Process. You will also benefit from learning a bit about the way Language Arts teachers use Writer's Workshop to manage their writing classes to improve student attitudes and production.

If you haven't asked your students to write in the past, start gradually with the simplest activities and build from there. In this section, you'll find a very practical discussion of three kinds of writing you can do in class. Start with the first kind, so-called casual writing activities, on a daily or every other day basis. Then, gradually work in some of the semi-formal writing activi-

ties perhaps two or three times a month. Finally, think about a large formal writing project that students can work on for 6-8 weeks or more.

Whether you've been writing in your class or not, including more writing will be easiest if you take advantage of the work your Language Arts teachers are doing. They will all be using Six Traits, Writing Process, and Writer's Workshop on a daily basis in their classrooms, so students will already be familiar with these approaches. If you use them too, adding writing to your classroom, and all that it entails, will be far simpler and considerably less time consuming than if you try to reinvent the wheel of writing instruction all by yourself.

How Should I Use the Six Traits Criteria?

You do not need to instruct your students in the use of the Six Traits criteria, Language Arts teachers will take care of that. You merely have to support the use of the criteria in your classroom by letting students know that you will be using it to assess their writing, and, where appropriate, using a Writing Process approach that will allow students to make use of the criteria during the Revising and Editing stages of more formal writing projects. That's it. Just tell students you're using Six Traits for your assessment of their work, post the criteria in your room somewhere or hand them out with other class materials, and remind them to use the criteria to help them revise and shape their efforts as they go along. Obviously, if you choose to spend some time actually working with the criteria, your students will benefit from this. But exactly how much time you have will vary from teacher to teacher and class to class.

In addition to helping the students—who will no longer be wondering what their teachers are looking for—this should make dealing with student writing easier for you, too. First of all, your students will be producing much better work. And second, when that work comes in, all you really need to do is score it for each trait and hand it back perhaps adding simple coversheet comments here and there as you see fit. You can go much farther, of course, but you won't really need to. And you certainly won't need to spend hours making red pen corrections. Because students will have already been introduced to the Six Traits criteria and scoring guide, they will understand the scores you give them far better than the corrections, comments, and grades they've gotten from you in the past. In many cases, especially with older students, you'll be able to let them assess their own work, thus relieving you of the substantial burden of grading every single assignment they complete.³

How Should I Use the Writing Process?

As with the Six Traits criteria, the first thing you need to do is to tell students that you expect them to use the Writing Process whenever they are involved in the writing of more lengthy, formal prose. Remember, they will have already learned about Writing Process in elementary school, and in their Language Arts classes at the middle and high school levels, so you need not devote much class time to teaching it. Regarding the specifics of how you implement Writing Process in your particular classroom, there is wide latitude. You have a lot of choices, so what you should do is try a few things and continue with those that are successful. Here are some general recommendations to get you started:

³ I do this regularly with high school and middle school students and I have found that after working with Six Traits, most students can assess themselves just about as accurately as I can. In fact, most students at the high school level are tougher on themselves than teachers are. Self-assessment is a powerful tool. It's good for the students and it's great for you. And Six Traits is the perfect way to get started.

Tips for Using Writing Process in Content-Area Classrooms

- **When assigning formal pieces of writing like reports, base the students' work schedule on the seven stages of the Writing Process.** Set intermediate deadlines for each stage and encourage students to keep up. You need not "correct" or "grade" intermediate work; it's just good to let the students know you're monitoring their progress. This will help students budget their time wisely on long projects, which should raise the quality of their work substantially and reduce the number of late or incomplete projects you receive.
- **Model Writing Process activities for your students at the appropriate stages.** Let them see how you would handle a particular task. This need not be extensive. For example, you could demonstrate a pre-writing activity like brainstorming or webbing in just a few minutes. To model revising, just take out a piece of writing and show the students how you might use the Six Traits criteria to assess it and create a focused revision plan.
- **After drafts have been completed, allot time for sharing.** This aspect of the Responding stage is extremely valuable for students. It's also an easy way for you to see how they're doing. By taking some time for this activity early on in the project, you'll be able to help your students more efficiently as the deadline draws near.
- **During the Responding stage, establish the classroom as the primary audience for student work.** Students who write just for their teachers often write in a stilted way that hides their true abilities. Make sure your students know that they are writing for their peers.
- **Make a big deal out of the Publishing stage.** This helps students buy into the assignment and take more care in their finished product. It also allows them to enjoy the fruits of their labors, and encourages them to reflect on their work. Look for legitimate publishing opportunities for your students, both in school and out. If possible, get together with other teachers in the same subject area and/or grade level to share student work between different classes in a formal setting.

The Writing Process is a powerful tool. It is so helpful in structuring student effort (without getting in the way of student progress) that I often notice dramatic changes in the quality of work students turn in the very first time they follow it all the way through. The biggest change in your teaching may come from shifting expectations about the amount of time students need to complete a particular writing project. Refrain from requiring students to complete even short formal writing projects in less than two weeks. Active and frequent revision is a requisite for good formal writing—and revising takes time. There's no way around it. Even if your students are extremely talented writers, they will need significant time for revision in order to do their best work and to continue to improve. A month is probably more appropriate if you want students to perform at levels consistent with their abilities. It is my hope that as we begin to ask more of our young authors that we will begin to become more comfortable with giving them the same amounts of time professional writers need to produce their best work. There's good research support for allowing students 2-3 months to work on a single project.⁴ I know I appreciate that kind of time when I'm working on something difficult that I really care about.⁵

⁴ See *What Writers Know with Time* by Jay Simmons, *Language Arts*, Vol. 73, December 1996.

⁵ For example, it took me well over 150 hours to create this document even though I had written much of it earlier in the school year.

How Can I Use a Writer's Workshop Approach in My Classroom?

If you're not a Language Arts teacher, you can't do Writer's Workshop on a regular basis. You don't have the time. But you can still make use of some of the things teachers have learned from this method of managing student writers. You can also take advantage of the fact that more and more of your students will have experience working in Writer's Workshop classrooms, and will therefore find it a natural way to be productive when they have to write in your class.

First of all, you *can* run a Writer's Workshop class every once in a while. Do you ever have a day in your classroom where students spend time on large projects? When you've got writing to do, structure the period like Writer's Workshop. It is considered to be the most effective way to manage writing time, and in general, students love it. Second, you can use some of the basic principles of Writer's Workshop whether you're teaching it formally or not. Here's how:

Important Ideas Content-Area Teachers Can Borrow From Writer's Workshop

- **The importance of giving mini-lessons and the rationale for leaving the majority of class time for writing.** If you want students to write well, let them write often for extended periods of time. Spend less time lecturing and let them spend more time applying the things you've just lectured on. Use lesson time in an efficient and focused way to address specific problems your students are having at the time. And then just let students get back to work. The more time your students spend writing, the better they will get.
- **The importance of letting students choose their own topics and formats.** We all write better when we have some control over what we write and the form in which we present our ideas. Professional writers usually have some say in their choice of topics, and that makes a tremendous difference in the quality of what they produce. Less capable writers need even more latitude than the pros. Guide them a gentle push toward good choices that are consistent with your curricular goals, but don't hem them in unnecessarily.
- **How taking Status of the Class can help keep things on track.** Checking in with students, formally and publicly on a regular basis, helps keep everyone on track. It doesn't have to count for a grade, and it doesn't have to be punitive in any way. You just have to do it once in a while in order for it to be effective. It's also a great way to build excitement about the cool projects students are working on.
- **How writing with your students makes things better.** A lot of teachers tell me that when they write with their students it just doesn't work. They screw up. They can't get anything out, or what does come out embarrasses them. Writing with the students is one of my favorite activities because I have come to believe that even when it doesn't work it does. If you have trouble writing on a topic you've assigned, imagine the trouble your students are going to have. Writing with your students helps you develop empathy and insight. Most of my best lessons have come up on the fly while I was trying to write in front of a class. Whenever you have a problem writing, take note of how you solve it and then pass that information on to your students. The other valuable thing you can do is to give them a chance to critique your writing once in a while. You don't have to write every day or even every week. But do it regularly, so students will know that you're a writer too, and that you struggle with some of the same things they do.
- **The value of mini-conferences.** There's nothing better than working one-on-one with students. Whenever I teach Writer's Workshop, I get to work individually with 8-12 students in the course of a full class period. I spend just a minute or two with each student while others are working on their own, but I'm amazed at what can be accomplished in so short a time. Short conferences keep you and your students focused on the most important aspects of the work. You'll get to know your students, and they'll get to know you.
- **The vital role that sharing plays in helping writers improve their work.** How do professional writers improve their work? By sharing their work with other writers, of course. There's no better way to encourage revision than to have a student share a piece of writing, and then have other students in the class respond, in a constructive way, to what they've heard. When I am unsuccessful at convincing students to take a particular approach with their writing, I ask them to share their work with the class and then to consider the reactions of their classmates.

Even though you won't be teaching Writer's Workshop per se, you can still benefit from a workshop approach to managing your classroom. In fact, many Writer's Workshop teachers also teach Reader's Workshop (Math, Science, and Social Studies can also be taught very effectively in a workshop style; I am beginning to notice elementary teachers creating classroom environments they call "math workshop" and "science workshop.") Workshop-style teaching works because it emphasizes the value of the learning community and the importance of students actively *doing* work instead of just sitting passively in their desks *wondering* about what the work will be like. Think about using a workshop-style approach in your class. You may be surprised at the results you get, and how much easier it is to teach than the traditional Direct Instruction model.⁶

But What Kind of Writing Should I Do?

In *Coming to Know: Writing to Learn in the Intermediate Grades*, editor Nancie Atwell makes a point that is well worth reiterating here: the same techniques that Language Arts teachers use to help students write effectively can and should be used in content-area classrooms, too. In particular, Atwell stresses the value that many Language Arts teachers have found in teaching their students how to use many different forms of writing as thinking tools to help them learn more effectively. Students *can* write to learn, but only if we give them a chance.

In the Language Arts classroom we have started to draw on... writing process theories and... writing workshop methods to help children learn writing. If students are able to use writing to help themselves learn, these theories and methods must find a place in the other disciplines. When content-area teachers know writing from the inside, through reading about how others in their fields have written, observing student writers, and writing themselves, they can begin to tap this most powerful tool for making sense of experience. And they can reject what customarily passes for writing in the content areas: short-answer, fill-in-the-blank, and essay tests, and, still the worst offender... the written report.

Nancie Atwell, *Coming to Know: Writing to Learn in the Intermediate Grades*

That having been said, if you haven't done much writing in your classroom in the past, where do you start? What kinds of writing should your students be doing? With specific regard to your discipline, your curriculum, your grade level, and your unique teaching style, what forms of writing are going to work best? And how, as a content-area teacher, can you come to understand how writing helps your students learn?

Among those teachers who have studied the value of writing as a learning tool, a consensus has emerged that there are essentially three types of writing that can help you organize the way you work writing into your class. Some teachers refer to them as levels of writing,⁷ but I don't like that because it makes it sound like one kind is inherently better than another, when in fact, all three can be equally useful in helping students understand and retain information effectively. In describing these three types of writing to teachers and to students, I prefer to draw on the vocabulary of that ubiquitous secondary school social institution: the school dance. I like to refer to these three types of writing as casual, semi-formal, and formal.

⁶ One of the huge advantages workshop-style teachers enjoy is great freedom in planning. When you allow students to set the agenda (within appropriate bounds, of course) you don't spend hours planning lessons every week. And the lessons you do plan are much more successful because they are targeted, in a timely way, to actual student needs.

⁷ Indeed, the term "levels" of writing is very common and has been formally codified in several books, one of the best of which is Rhoda Maxwell's *Writing Across the Curriculum in Middle and High Schools*. Much of the material in this section comes from her book.

Casual Writing: A Come-As-You-Are Thinking Tool

If you think about all the writing we do as adults in the course of our daily lives, most of it is pretty casual. Notes, lists, directions, scribbles on the cover of the phone book. We use this kind of writing to organize our thoughts, to help us remember, and sometimes just to relax and get our minds working on a problem. I like to think of it as sketching with words. It's rough work, done quickly, that helps us remember, organize, and manage the information of our day-to-day activities. If this is the majority of writing we do as adults to stay on top of our day-to-day obligations, it only makes sense that we prepare our students for adulthood by encouraging them to engage in this type of activity with the same frequency, for the same reasons, and in the same purposeful manner.

A Concise Guide to Casual Writing in the Content Areas

Forms	Style	Audience	Function	Assessment
<ul style="list-style-type: none"> ➤ Notes from readings. ➤ Notes from lessons and lectures. ➤ Lists. ➤ Notes from small-group discussions. ➤ Brainstorming. ➤ Brief descriptions of thought processes and problem-solving approaches. ➤ Free writing. ➤ Mapping, webbing, first attempts at organizing. ➤ Developing questions. ➤ Journal writing. ➤ Log writing. <p>And so on...</p>	<p>Informal, even idiosyncratic; like talking to close friends or to yourself. Fluency is more important than correctness.</p> <p>Try to help students overcome their anxieties about this type of writing by modeling it for them. Show them how "loose" it can be and still be valuable.</p> <p>Because individual thinking styles are unique and varied, students should be encouraged to try as many different forms as possible.</p>	<p>The writer, and in some cases, the teacher or peer group. In general, this writing is for personal use not public consumption.</p> <p>When we think of audience, we usually think of affecting others in some way. The question to ask yourself here, however, and to put to your students, is this: How can you record this information so that you can use it effectively later?</p>	<p>Thinking through writing, discovery of thought processes, organizing thoughts, generating ideas, developing fluency, aiding memory.</p> <p>Writings of this nature are the building blocks of more complicated thinking and learning. They are supportive or generative, not usually ends in themselves.</p> <p>This kind of writing often helps students discover their own processes for success. It also improves memory retention.</p>	<p>Assess content only, if at all. This type of writing is often not assessed. In fact, many teachers feel that if this type of work is graded it sends the wrong message: students do it just to get a grade, rather than coming to see it as the powerful learning tool that it is.</p> <p>This type of writing is best used by teachers when it is used as a true assessment tool: something that allows teachers to "sit beside" their students and see how their minds are working.</p>

Now What Was He Thinking When He Did That?

Have you ever wished you get inside the brains of your students and really find out how they think, what they know, and how best to teach them? Well, you can, by having them write down the ways they solve problems. One of the most valuable forms of casual writing is, thankfully, one of the easiest to use. I haven't come across an official name for this kind of writing, so I call it "thought process writing" because it allows teachers to get a glimpse of the mental processes going on behind the scenes in the minds of students as they work. I use this kind of writing all the time in math,⁸ but I've also found it to be valuable in other subjects—especially where step-by-step procedures are called for or whenever a student has reached an important juncture in a

⁸ The absolute best book on this is Marilyn Burns' *Writing in Math Class*. In fact, all of her books on math are probably the best resources any teacher or parent could use. Marilyn Burns dominates the contemporary mathematics landscape; I can't recommend her work highly enough.

project. It is extremely helpful when it is not easy for me to see which steps students understand and which steps they do not.

Recently, I was helping a 4th grader who said he needed help adding fractions, so I asked him to write down a problem and solve it. The problem was: seven twelfths plus nine twelfths.

He worked confidently if not quickly, and after a few seconds looked up at me ready to move on. This was what he wrote:

$$\begin{array}{r} 7 \\ \hline 12 \\ 9 \\ + \hline 12 \\ \hline \end{array} = \frac{12}{16}$$

I immediately leapt to the logical conclusion that he knew how to add fractions but that he simply needed a quick reminder about making sure the numerator stayed on top and the denominator stayed on the bottom. But, since I hadn't worked with him before and didn't know him very well, I decided to ask him to write down the process he used to come up with the answer. At first, he didn't want to do it. "We never do this in math. This is writing," he complained. But after a little coaxing, he went ahead. This is what he wrote:

first I took twelv then took seven out of it
then nine I took seven away from nine

Obviously, my initial assumption was way off the mark. This student needed a lot more help than a simple reminder about which number goes on top and which number goes on the bottom. Had I launched into my intended lesson, I would have only wasted my time and confused this already confused little boy.

This type of writing, which can be done all the time in just about any class, is one of the most efficient and effective assessment tools I know of. It guides my teaching and helps me make the best use of my time. But it also benefits my students as well. As this little boy began to write out the process he went through to come up with the answer, he began to realize that he really wasn't that sure about what he was doing. So, when I suggested we start at the beginning with fractions (and review a little basic addition as well), he didn't feel bad at all. Writing down his thoughts told him, without any critical intervention from me, that he didn't know how to do it, and so he was happy to get some help. I've since come to believe that this type of self-assessment activity often benefits the student more than it does the teacher.

Take Note(s)

My teachers always wanted me to take notes. But I hated note taking when I was in school. And most of my friends did, too. If my teacher had something interesting to say, I just wanted to listen, to process all the information I could without the distractions of trying to decide what ideas needed to be written down and how to go about doing it in a way I could recognize after the class was over.

Even though we ask students to take notes, we rarely teach them how to do it well, nor do we consider just how complicated note taking is. To be successful, students need a variety of strate-

gies for learning how to take notes effectively. Here's a short list of ideas, adapted from Mary Ann Rafoth's *Strategies for Learning and Remembering: Study Skills Across the Curriculum*. Please note that some commonly suggested strategies are not recommended because research has shown that, despite their frequency of use, they are not very effective.

Generally Effective Note-Taking Strategies

- **Skeletal Notes:** For complicated material, skeletal notes provide a framework. The teacher provides a basic outline *before* the lecture, with blank spaces for students to fill in. The more space provided, the more students generally write. The framework helps students organize the material.
- **Note-Taking Cues:** Putting notes on the board and/or emphasizing particular words and phrases helps students know when and what to write down. I have frequently just stopped class and told everyone to write something down. It isn't very elegant but it gets the job done, though of course it is always better when students write notes in their own words.
- **Organization and Elaboration:** Encourage students to not only read their notes, but to re-organize them as well. This helps them understand and remember. Elaboration can come from many sources, but the best approach is to encourage students to relate their notes to previous knowledge and/or personal experience.
- **Using a Split Page:** Have students divide a page into halves and use the left side for major points or main ideas and the right for supporting details. This helps them recognize important ideas and facilitates more efficient self-study when reviewing notes at a later date.
- **Note-Taking Reviews:** Teachers can periodically collect student notes, review them, and make suggestions for improvement. The suggestions need to be specific and consistent with note-taking strategies previously introduced. Telling students to simply take more notes is not very helpful. This is not a note-taking strategy per se, but it does help. Rafoth recommends that teachers not evaluate notes for a grade.

Generally Ineffective Note-Taking Strategies

- **Instructor's Notes:** Some teachers provide a complete set of notes to students, but researchers report that students remember their own notes much better. Students may not understand teacher-written notes. And, as with any kind of material that needs to be committed to memory, the construction of personal associations, through the use of the student's own words, is critical.
- **Transparencies:** Rafoth cautions about the use of transparencies because often the information is too complex and should be previewed before it is presented. Because transparencies require that students both listen *and* read during a lecture, they may not be able to sustain sufficient concentration to interpret and retain the information presented.

It's Not Exactly Note-Taking But...

My favorite form of note-taking isn't really note taking at all. I call it "summary note-taking" because it is more of an exercise in summarizing even though the results retain the basic flavor of notes. Here's how it works:

Summary Note-Taking

- Step 1: Tell students you don't want them to take notes while you are talking.** Tell them you want them to concentrate on what you are saying, to bring their full attention to the material you are working with.
- Step 2: Break up your lecture into 5-10 minute chunks.** This is an ideal amount of material for students to work with. Most students can keep this much material in their heads, but not much more.
- Step 3: At the end of a chunk, ask students to summarize what they've heard in their own words.** Ask students to write a quick paragraph or two (not a list or an outline) describing what they think you just said. Encourage them to translate what you have said into language that they are more comfortable with, if necessary. Tell them to guess-spell any technical terms or proper nouns they may not be familiar with.
- Step 4: Ask a few students to read their summaries to the class.** Accounts of the material presented will differ. In the case of a student offering incomplete material, ask other students if they have anything they want to add. In the case of a student offering incorrect material, ask other students if they agree or disagree with what the other student has written. This is a great way to find out how well you are being understood.
- Step 5: Compare versions of student summaries and give students a chance to amend what they have written.** Allow students a couple of minutes to consolidate their summaries with those they have heard from other students.
- Step 6: Move on to the next 5-10 minute chunk of your lecture.** At the end of the class, just about every student should have a thorough summary, written in their own words, of what you presented. If you want, collect the summaries periodically and offer tips to students about how they might be able to improve their skills.

Because you have to allow a few minutes for writing summaries and comparing “notes” between each chunk of your lecture, you will not get through as much material as you usually do. But student retention and understanding will be much higher. So, you should avoid some re-teaching, and that should make up for the lost time. But the things I like best about this style of note-taking are: [1] the students are giving me their full attention while I talk; [2] the students come up with something written in their own words which helps them remember what they’ve learned and helps them gain confidence in their writing ability; [3] I can find out right away what they understand and don’t understand; [4] they get to work together to help each other learn; and [5] I don’t have to stand up there and talk the whole time which just makes them bored and me tired.

A Final Note on Note-Taking

Research shows that note-taking is very effective at helping students learn and retain information. But most students don’t do it, and those who do don’t do it very well. If we want students to use note-taking effectively, it only makes sense to show them why it is important and to help them get better at it as they mature. As with so many things, the best way to do this is to provide them with a variety of useful strategies and then to model those strategies for them.

Lists, Lists, and More Lists

My favorite casual writing tool is the simplest one of all: the list. I find that students get more real work done with lists than with any other casual writing activity. I think there are two reasons for this: [1] Because a list is the simplest kind of writing we do, most of our mental bandwidth is conserved for actually thinking about the task at hand; and [2] Anyone can make a list. There's virtually no chance that a student will fail at this task. Consequently, students feel less self-conscious and are more likely to use this tool than any other once they have been introduced to it.

Another thing I like about lists is that it is fairly easy to show students how to move from a list to more formal writing. Recently, I was working with a 4th grader on a report about otters. She started out by showing me something she copied out of an encyclopedia. When I suggested she try another approach, she was crushed. Like many students, she had no confidence in her ability to produce a piece of informational without relying plagiaristically on another source. (She wasn't a bad student, she just hadn't ever been taught how to do research). So, to get her started I asked her to make a list off the top of her head of what she knew about otters. Here's what she came up with:

Otters have webbed feet
Otters are awkward on land
Swim
Otters have flat tails
Otter's paws are sensitive
Otters have short claws that won't go beyond their paws.
Otters have flexible backbones
Otters can curl themselves up into circles
Otter's lungs have to be very big so they can stay under water

Next, I asked her to start her report over from scratch using her list to guide her. Here's what she came up with (her strange title, I found out, came from the section of the encyclopedia on the anatomical "structure" of otters):

Structure

Otters have webbed feet and are awkward on land. Swim. Otters have a tail almost flattened. An otter's paws are sensitive. Otters have short claws that won't go beyond their paws. Otters have the most flexible backbones. Otters are able to curl themselves up into almost perfect circles. An otter's lungs have to be very big in order to stay under water for a long time.

Not bad, actually, for this little girl. She has some learning disabilities and is borderline ADHD, I think. So, I had her read it to me, tell me where she got the info (encyclopedia, of course), and if she thought it was done (she said, yes, except for correcting). Then we chatted briefly about how to make something interesting. I asked her: "What is the most interesting thing to you about otters? What would interest your friends at school?" Stuff like that. I also suggested

she get a new title, something that would draw her readers in, but I didn't tell her how to pick one.

A half an hour later, with no help from me other than keeping her on task and reminding her occasionally that she should forget about writing a "report" and instead just try to write something her friends would enjoy, this is what she came up with:

O is for Otter

I think the most interesting thing about otters is that they can curl themselves up into almost perfect circles just like the letter "O". Otters have amazing backbones. Otter's backbones can also help them swim through tight squeezes.

Otters have webbed feet that help them swim fast. An otter in danger can quickly swim under the water if an enemy gets too close. But their webbed feet make them awkward on land.

Otters' claws are so short that they can't go beyond their paws. If you ever get a tamed otter you don't have to worry about them clawing you! Otters can't catch fish because of their claws. They only eat small shell fish and sea urchins.

Now, this won't win a Pulitzer, but it's a lot better than what she started with, and it is all her own writing and thinking. (Notice how much "new" material crept into her writing as soon as she stopped thinking about encyclopedias and started thinking about her audience and what she knew about the subject!) I did not write a single word of this for her. I only prompted her at certain points not to give up and to make sure she was writing something that she thought her readers might actually enjoy.

What Do You Think? Why Do You Think It?

Here's a casual writing activity that I use with older students when I want to help them sharpen their expository writing skills. As its name implies, the essence of expository writing is exposure. The main idea is to expose a main idea. But the writer owes it to the reader to do a bit more than that. In addition to encouraging them to expose their thoughts we have to help students realize that they must also expose their thinking, they must try to tell their readers not only *what* they think but *why* they think it as well. That's how readers come to trust the analyses, assessments, evaluations, and recommendations that are the cornerstones of this mode of writing.

The secret to good expository writing (and, ultimately, to just about every other kind of writing, too) is always being able to answer two simple questions over and over and over again: [1] What do you think?; and [2] Why do you think it? That's really all there is to it.

Take a look at this passage from a high school student I was working with in U.S. History:

President Franklin D. Roosevelt was a political genius. He accomplished more than any other president before him. He led our country through two of the biggest crises in the 20th century, the Great Depression and World War II. But in 1945 his death shocked the country, and the Vice-President, Harry S. Truman had to step in. Truman was not prepared for his new role. No matter what he did it wasn't good enough. Actually, it wasn't Roosevelt enough. It wasn't until the use of nuclear weapons came up that Truman had a chance to prove himself to his country.

(I have deliberately taken it right out of the middle of the paper so we can concentrate intentionally on a small chunk of his argument—or *exposition*, if you will. Imagine, for the sake of this example, that it represents a kind of mini-paper and that it exists more or less by itself.)

One thing students have trouble with is understanding what they need to do to support an argument. Specifically, they need to know that it isn't sufficient for a writer merely to lay out one idea after another and hope the reader doesn't notice a few sloppy suppositions.

What Do You Think?	Why Do You Think It?	
I think that...	I think it because...	
1 ➤ President Franklin D. Roosevelt was a political genius.	2 ➤ He accomplished more than any other president before him.	
2 ➤ He accomplished more than any other president before him.	1 ➤ President Franklin D. Roosevelt was a political genius.	
3 ➤ He led our country through two of the biggest crises in the 20 th century, the Great Depression and World War II.	I read about it. [<i>Sources should be cited in bibliography.</i>]	
4 ➤ But in 1945 his death shocked the country, and the Vice-President, Harry S. Truman had to step in.	I read about it. [<i>Sources should be cited in bibliography.</i>]	
5 ➤ Truman was not prepared for his new role.	This is my opinion. [<i>Supporting detail or other attribution should exist at other points in the document.</i>]	TROUBLE SPOTS
6 ➤ No matter what he did it wasn't good enough.	This is my opinion. [<i>Supporting detail or other attribution should exist at other points in the document.</i>]	
7 ➤ Actually, it wasn't Roosevelt enough.	This is also my opinion, but it's sort of backed up by: 1 ➤ President Franklin D. Roosevelt was a political genius. 2 ➤ He accomplished more than any other president before him. 3 ➤ He led our country through two of the biggest crises in the 20 th century, the Great Depression and World War II.	
8 ➤ It wasn't until the use of nuclear weapons came up that Truman had a chance to prove himself to his country.	This is my opinion. [<i>Supporting detail or other attribution should exist at other points in the document.</i>]	

You can see that the value of this analysis is how quickly and easily it points out potential trouble spots, the individual sentences where the writer may be creating some problems for himself. It also forces writers to explore the linkages, stated and implied, between each sentence in their argument.

If students are having trouble telling why they included a particular sentence, or if they can't articulate the connection between a particular statement and the rest of what they have written, have them pull it out and see if the writing holds up. Anything that sounds funny after a sentence has been deleted, probably requires that sentence for its support. By tugging and pulling at their writing this way, students can track down those all-important lynch-pin ideas that hold their papers together.

What Did You Write? Why Did You Write It?

Here's a related activity you can also use to help student writers sharpen their expository prose. In this activity, using the same student sample, we'll take a look at each sentence, one by one, and see how they relate to each other in terms of how they function (or don't function) to advance the basic argument.

Sentence	Function
This is what I wrote...	This is what it is...
1 ► President Franklin D. Roosevelt was a political genius.	Statement: Introductory.
2 ► He accomplished more than any other president before him.	Detail: Supporting detail.
3 ► He led our country through two of the biggest crises in the 20 th century, the Great Depression and World War II.	Detail: Supporting detail; justification of sentences 1 and 2.
4 ► But in 1945 his death shocked the country, and the Vice-President, Harry S. Truman had to step in.	Statement: Transitional.
5 ► Truman was not prepared for his new role.	Statement: Introductory.
6 ► No matter what he did it wasn't good enough.	Detail: Enhancing understanding of sentence 5.
7 ► Actually, it wasn't Roosevelt enough.	Detail: Enhancing understanding of sentence 6.
8 ► It wasn't until the use of nuclear weapons came up that Truman had a chance to prove himself to his country.	Statement: Concluding.

At first glance, this type of analysis may seem too complicated for student writers. But any student can pull out his or her sentences, and most students should be able to determine whether something is a statement or a supporting detail, and this is about as far as you have to go at first. If students could learn to see the relationships between the statements they make and the details that support them, they'd be a long way toward understanding how to express themselves effectively in writing.

Details can be analyzed as having one of two functions in supporting a given statement: they either enhance the reader's understanding or advance the storyline (the best details do both). Statements can be viewed as having one of three functions: introducing an idea, transitioning between ideas, or concluding an idea. To make it easier for younger writers, just have them answer these questions about any sentence in a give paper: **[1]** Is the sentence a **statement** or a **detail**? **[2]** If it's a statement is it **introductory**, **transitional**, or **concluding**? **[3]** If it's a detail does it **enhance understanding** or **advance the storyline** or **does it accomplish both goals**? Even if students can't do this very well at first, it's a great exercise in analyzing arguments. It doesn't have to work out perfectly to be useful. Not all statements and details can easily be accounted for in exactly this way. This approach can also be applied to informational reading that the students do as well. Used in this fashion, it's almost like a note-taking strategy for analyzing complex arguments.

Semi-Formal Writing: Conventional Yet Comfortable

Somewhere between the pick-up-your-pencil-and-go quality of casual writing and the thoughtful deliberation of publisher-perfect prose, there lies a vast expanse of pen and paper possibilities. A lot of the writing you'll do in class falls into the semi-formal category.

A Concise Guide to Semi-Formal Writing in the Content Areas

Forms	Style	Audience	Function	Assessment
<ul style="list-style-type: none"> > Essay questions. > Summaries. > Reaction Papers. > Responses. > Drafts. > Reflections. > Informal Informational Letters, Notes, or E-Mail. <p>And so on...</p>	<p>More formal, but not, strictly speaking, polished prose; like talking to an audience outside one's circle of close friends. Again, fluency is more important than absolute correctness, but this kind of writing has to be readily interpretable by other people, so it must make sense and it must communicate effectively.</p> <p>For students who are familiar with the Writing Process, this will feel a lot like a coherent draft. But revising isn't often required or even desired.</p>	<p>The writer, classmates, teacher, parents. The writer may have a specific audience in mind, but this is less important than the writer's general realization that this type of writing differs from casual writing because the writer is writing for someone other than himself or herself.</p> <p>The question to ask yourself and your students is this: Given the semi-formal nature of this type of writing, and the fact that you're not going to be revising it, how could it be written in a way that would be useful to people other than the author?</p>	<p>Practical, efficient sharing of information; organizing thoughts coherently over several paragraphs; developing ideas beyond the brainstorming stage; explaining, informing, offering advice. This is practical sustained communication.</p> <p>This type of writing should have some purpose, though that purpose should be realized more in content than in execution.</p> <p>This kind of writing often helps students develop ideas efficiently. This is practical, every day communication.</p>	<p>Assess primarily for content, but form must not distract from presentation of information.</p> <p>This type of writing can be assessed effectively for the traits of Ideas, Organization, and Voice. Assessments for Conventions should be cut and dried: either conventional correctness aids the reader in acquiring the information, or conventional problems inhibit the reader's ability to understand what the writer has in mind. Detailed analysis of conventional difficulties is not appropriate.</p>

Response Writing

My favorite type of semi-formal writing is response writing. I like it because it encourages students to say what's on their minds. I get honest feedback from them in a format that is more thoughtful than just having them speak out in class or jot a quick note in their journals. Responses can take many forms, there are no hard and fast rules. Prompts are helpful but not absolutely required, though students should focus their responses narrowly because they won't have time to cover many different issues in any thorough way.

Here's a typical field trip response:

I really enjoyed this field trip. I wish we could have done this sort of thing before the lab. The first place we visited was the Spurlock residence. Several of the ideas that I liked from his garden were his mixing of ornamental plants with fruit plants. This idea is very important for our garden project. The sheltered area with all the trees around it where this garden was located was also very nice for wind protection and providing a microclimate. However, this was also a hazard in that there was not enough air flow. I also liked his natural posts for his trellises, this added a look of naturalness. The other item that I was impressed with was the labeling on all the plants. This is very important for us to remember for our project. The only suggestions I had other than the ones already mentioned are using a net so that birds and other animals cannot eat the fruit, and hiring people to prune all his plants correctly.

The next place we visited was the Yenke residence. The items that I really liked were the sheltered area, the retaining wall, and the spacers and guidewires used on his fruit trees. I think retaining walls in our garden would add a sense of confinement to our project and would be very beneficial. I also think that having spacers and different other training methods would be useful for visitors to our garden. The alternatives I would suggest for this site are to cut the oak tree down that is nearest to the garden area because this would provide a lot more sun to flow into this area. I also think the mulch was applied a little too heavy for all the crops. Too much mulch could cause diseases and other problems. The only other item I wrote down was to learn how to prune correctly and to place plants with consideration of how they are going to grow.

Overall, I think this trip was very beneficial for the class because we got to see hands on how the topics we are learning can benefit a homeowner. I also think it was helpful to try and help these homeowners on the problems they had relating to fruit.

You can see how using Six Traits assessment for the traits of Ideas, Organization, and Voice would be helpful here. This writer has lots of good ideas. His organization, while not spectacular, makes his writing easy to follow. And his voice is strong. He's offering an honest, personal reaction to his experience, but it's not idiosyncratic; he's keeping his audience in mind, making sure that his observations will be valuable to his teacher and to the other students in his project group. Conventionally, he has some minor problems, but they don't garble up the meaning in any significant way.

If you find yourself doing a lot of these assignments, have the students work with you to adapt the Six Traits criteria to this kind of writing. You can also add response-specific criteria if you feel the need. If students copy down the criteria onto a single sheet of paper before the activity begins, they can use this special criteria sheet almost like a data-gathering tool while they participate. When the activity is over, all they have to do is look at their notes, jog their brains a little bit, and write it up into a short prose piece.

Fiction with Facts

Normally we think of fiction writing as the sole province of the "creative writing" teacher. But teachers in the content areas are getting more creative all the time. Some of the best results I've seen have come from teachers who introduce their students to high quality historical fiction, and then ask their students to take a crack at this challenging but inspiring genre. Here's a sample from a unit on Latin American history. The assignment was to write a short news story, from an Inca perspective, about an important historical event:

Atahaulpa Captured

Yesterday, as innocent Atahaulpa approached a white-skinned beast in curiosity, the man, rumored to be named, Pizarro (pih-zah-roh), tried to force him to swear an oath on a book called, "The Bible" (by-buhl) that he was loyal to the king of the man's homeland, called Spain (spayn). When Atahaulpa refused, the man blew huge, steamy, black balls of mixed rock and metal through large black pipes. These balls flew out of the pipes at hideous speeds.

This caused a battle just long enough for Pizarro to capture Atahaulpa! Pizarro lost no men, though we lost a few because of these strange weapons that the men carry. Atahaulpa has offered Pizarro a ransom of one room full of gold and two more of silver. We have heard a few rumors that Pizarro has accepted this offer and he probably has, but we will let you know more once we find out.

Formal Writing: All Dressed Up, Some Place to Go

When I think of the hours my schoolmates and I spent writing reports, the incredible anxiety we experienced every time one of these monsters was assigned, the ridiculously poor work we turned in, and how little we learned from it all, I'm really glad—and proud of the teaching profession—that so many content area teachers are exploring other alternatives for formal student writing. After all, every one of us went through it. What was the point of spending all that time, reading all that research material, and copying it all over in your best handwriting, only to receive comments like: "Good work. B+" or "Poor support; C" or "Please write more legibly; B-"?

Each year in each class, I felt like I was being told to get all dressed up for a party that I didn't understand why I'd been invited to, and then when I did finally get all ready to go, I found out that the party never happened. When I talk to teachers and parents about this it is rare that I find anyone who can articulate any truly worthwhile value they gained from the experience of writing a research paper in school. Most folks, when pressed, won't even admit that there was much value in learning to do something substantial that they didn't see the value in; most people, when they really think about it, admit that the traditional school report experience just made them dislike serious scholarship and dread formal writing. But all of that is changing, and it is definitely a change for the better.

A Concise Guide to Formal Writing in the Content Areas

Forms	Style	Audience	Function	Assessment
<ul style="list-style-type: none"> ➤ Research Reports ➤ Business Letters and Other Formal Correspondence ➤ Job Applications ➤ Writing for Newspapers or Other Publications ➤ Submission to a School Anthology ➤ Essays for Contests ➤ Published Interviews And so on... 	<p>Formal; like talking to an audience of people you do not know; like you were giving a speech. Here, the conventions of presentation are just as important as any other trait of the writing.</p> <p>This type of writing requires the full Writing Process.</p> <p>The writing style must suit the demands of the medium and the expectations of the intended audience.</p>	<p>The writer, classmates, teacher, parents, or a group of people unknown as individuals to the author (political leaders, students at other schools, scientists, historians, etc.). The writer must have an audience in mind even if he or she does not know anyone personally in that audience.</p> <p>The question to ask yourself and your students is this: How can I write to affect my audience? How can I best use my ideas and my presentation to get my point across to my readers?</p>	<p>Learning the value of producing formal written communication to achieve a specific goal; learning to write for a specific group of readers; learning to produce final, published writing that meets the expectations of a target audience.</p> <p>This type of writing should have a definite purpose, and the author should be able to articulate that purpose early on in the Writing Process.</p>	<p>Assess using Six Traits criteria. You may, in concert with your students, create additional criteria specific to the particular form of writing your students are doing. But the main assessment should be performed using Six Traits. Students should assess their own work as well.</p>

Rethinking the Traditional School Report

We're used to thinking of formal writing in the content areas as primarily the writing of the traditional school report. But this view is no longer regarded as valuable or viable when it comes to preparing students for the adult world, or even college for that matter. The traditional school report is not an authentic form of written expression. It is a uniquely academic contrivance; outside of school it does not really exist. But, as Jack Wilde notes in his essay "The Written Report: Old Wine in New Bottles" from the book *Understanding Writers: Observing, Learning, and Teaching*, the problem lies not in the report itself as a form of written expression, but in how we ask students to write them:

Surely adults are called upon to write reports, so the form has validity. The purpose, though, is different... A business that requires written reports does it... to discover something that neither the employee nor the employer knew, nor easily could have come to know without the report. The report is... a *coming to know* on the part of both the writer and the readers.

Jack Wilde, The Written Report: Old Wine in New Bottles

Nancie Atwell, in her introduction to the book *Coming to Know: Writing to Learn in the Intermediate Grades*, restates Wilde's excellent observation in terms directed squarely at the school environment:

The problem with school reports lies in our methods for assigning them. We need to put the emphasis where it belongs—on meaning—and show students how to investigate questions and communicate their findings, how to go beyond plagiarism to genuine expertise....

Nancie Atwell, Coming to Know: Writing to Know in the Intermediate Grades

So if traditional reports are what we're used to, how do we go about re-thinking this kind of writing in our classrooms?

I'd like to introduce you to three models you can use to generate more authentic writing assignments that should be of great value to your students in leading them toward authentic scholarship, original thinking, and a true "coming to know." These models are not mutually exclusive. I use them all to one degree or another, and I would encourage you to do the same.

Model #1: Write Like the Pros

At the heart of every academic discipline there are a variety of real-world professional careers. That's how the disciplines became disciplines in the first place. The discipline of Science has its physicists, chemists, and biologists, but also doctors and other scientific professionals. The discipline of Social Studies features historians, politicians, lobbyists, social scientists, and a huge range of peripherally related careers. Even P.E. can lay claim to professional trainers, coaches, athletes, nutritionists, exercise physiologists, and so on (the overlap with Science is a natural here). So why not pattern the writing activities of your classroom after the writing activities these professionals pursue? Rather than just asking students to study History or Science or Math, why not have them *doing* History, Science, and Math instead? And if they're doing the same things professional historians, scientists, and mathematicians do—following the models of professionals in their respective fields—their writing assignments should match as closely as possible the forms of writing done by professionals in those disciplines.

To come up with good writing assignments for your students, just ask yourself what kind of writing professionals in your discipline need to do in the course of their careers. I don't know your disciplines nearly as well as you do, but here are just a few ideas I came up with:

Discipline	Professional	----- Forms of Writing -----	
Social Studies	Historian	<ul style="list-style-type: none"> ➤ Original Research ➤ Annotations for the Publication of Authentic Historical Documents ➤ Verification of Documents ➤ Biographies ➤ Interviews 	<ul style="list-style-type: none"> ➤ Documentaries ➤ Letters ➤ Journal Entries ➤ Research Grant Proposals ➤ Analyses of Current Events for Policy Consultations
Science	Biologist	<ul style="list-style-type: none"> ➤ Lab Reports ➤ Descriptions of Processes ➤ Observations ➤ Letters ➤ Journal Entries 	<ul style="list-style-type: none"> ➤ Environmental Impact Analyses ➤ Environmental Policy Consultations ➤ Research Grant Proposals ➤ Original Research
Math	Computer Scientist	<ul style="list-style-type: none"> ➤ Descriptions of Mathematical Theories ➤ Technical Documentation ➤ Descriptions of Computer Languages 	<ul style="list-style-type: none"> ➤ Letters ➤ E-mail ➤ Analysis of Research Results ➤ Descriptions of Algorithms

For every area of your curriculum there are probably a number of professional careers (and if there aren't we had better be looking closely at that area of your curriculum). And for every professional career, there are many forms of writing in which those career professionals engage.

That's the kind of writing your students should be doing. The kind of writing that allows them to experience the discipline firsthand in an authentic way, just like they would if they were on the job in real life.

Model #2: The All-You-Can-Write Assignment Buffet Table

When I was a kid my mom liked to take me and my brother to the Royal Fork. The Royal Fork was one of those huge buffet restaurants where you could choose from literally dozens of things to eat and drink, and where, at just ten cents per year of age, a working single mom could feed a couple of hungry kids and still have a little left over from her meager teacher's salary. I used to love sliding my tray down the aisle picking up a little something here, a little something there. Items were arranged by category: salad stuff first, followed by veggies, then potato-like dishes, main dish-type things, and finally... Tada!... The big roast beef on the wooden table under the orange heat lamps. I always got a kick out of piling up my plate and making the tired, sweaty roast beef carver guy with the slightly wilting white paper hat lay those thin, juicy, blood-red slices all over the top of my food like some kind of bovine Saran wrap. I always asked for extra slices until my plate was completely covered. Hey, what could they do about it? It was an all-you-can-eat deal.

It didn't take me long to figure out the logic of how items were arranged in the buffet. For example, all the different salads were together so you could compare the offerings and get just the one you liked best. I mean, how many different types of Three Bean Salad can a person get excited about? If, like most folks, you picked one or sometimes two items from each category, you ended up with a complete and authentic American meal—you couldn't go wrong.⁹ So why not take a similar approach when designing writing assignments?

Recently I had the good fortune to meet with a brilliant Language Arts curriculum specialist from the Central Kitsap School District named Jan Chappuis. To help teachers in her district come up with interesting writing assignments, she developed a wonderful tool that, if thoughtfully employed, never fails to produce a complete and authentic assignment.¹⁰ I like to call it an all-you-can-write buffet. So grab a tray and I'll show you how to load up your plate.

⁹ Of course, this was in the glory days of the Four Food Groups, a decade or two before the "invention" of the more austere but dietetically superior Food Pyramid.

¹⁰ Jan lays out her tool in the most ingenious way using multiple pieces of paper cut into concentric circles and divided into regions sort of like a sun dial. Unfortunately, it is not possible to include it in this form here. So, I have modified her materials slightly for this presentation. I also came up with the restaurant buffet metaphor. She calls her system something else. But I do want to give her full credit for coming up with this approach and to thank her for letting me use it. I haven't seen it anywhere else, and I think it will be very useful to many teachers and students. I hope she puts it in a book some day.

Role	Format	Audience	Purpose	Approach
Choose one or possibly two. Most assignments will have one.	Choose one only. Only in rare cases would combining formats make sense.	Choose one or more. If more than one, designate a primary audience.	Choose one or more. If more than one, designate a primary purpose.	Choose several. Longer pieces will require more varied approaches.
The student takes on a role and writes from this perspective	The final version must be published in exactly this format.	This is the student's intended audience. The is who the piece is being written for.	This is why the piece is being written. The writer works toward achieving this goal.	This is how the writer will go about achieving his or her purpose.
> Advertiser > Newscaster > Tour Guide > Curator > Panelist > Reporter > Product Designer > Artist > Biographer > Political Candidate > Biologist > Engineer > Historian > Expert in ... > Elected Official > Parent > Teacher > Self > Detective > Editor And so on...	> Magazine Article > Editorial > Brochure > Short Story > Play > Fairy Tale > Myth > Poem > Novel > Report > Diary > Journal > Biography > Autobiography > Newspaper Article > Letter > Manual > Booklet > Interview > Textbook And so on...	> Friends > Parent > Self > Teacher > Young Children > Public Figures > Persons in Authority > Supervisor > General Public > People From Other Cultures > People From Other Time Periods > People From Other Places > Professionals in Same Discipline > Investor > Judge or Jury > School Board And so on...	> Change Thinking > Inform > Explain > Change Action > Entertain > Initiate Thinking > Tell a Story > Instruct > Initiate Action And so on...	> Analyze > Challenge > Classify > Compare > Conclude > Contrast > Defend > Define > Demonstrate > Describe > Evaluate > Explain > Interpret > Investigate > Justify > Persuade > Predict > Propose > Question > Reflect And so on...

To create a writing assignment, simply follow the instructions for each category. Here's what a few sample writing assignments might look like:

Content Area	Assignment
Social Studies	You are a newspaper reporter from the Atlanta Constitution covering the battle of Gettysburg. You have followed the battle and have now just listened to Lincoln's Gettysburg Address. Write a newspaper article for the people of Atlanta that will inform them of the results of the battle and its impact on the Confederate war effort. Describe the battle and its aftermath. Analyze the balance of power between the two sides as a result of the battle. Reflect on the sentiments of Unionists before and after Lincoln's speech.
Science	You are a biologist hired as a consultant to The Nature Conservancy. Create a brochure for the general public that explains the Greenhouse Effect and its impact on worldwide climatic conditions. Analyze current data on the effects of greenhouse gases and predict the consequences of widespread global warming. Propose alternatives to improve the situation that are consistent with current positions held by The Nature Conservancy.
Math	You are an expert in fractions . Create a chapter for a textbook to be used by 4th grade students that will instruct them in adding, subtracting, multiplying, and dividing fractions. Include an introduction that justifies the instructional method you choose.

You can see that lots of wonderful writing assignments just naturally fall out of this approach. There are literally hundreds of possibilities, perhaps thousands if you think of all the subtle variations. For even more flexibility, add your own items to the appropriate categories. But the thing I'm most excited about is throwing it open to the students. Let them choose an item or two from each category and see what they come up with.

Model #3: Real Reasons for Real Writing

This third model is the one I use most often. It is my favorite because I believe it produces the best student work. It's also the most fun for me because I learn from it, too. It tends to produce the most varied results (a positive thing in my opinion), and it seems to engender the best attitudes among the students who participate. But it is also the least structured (it cannot be "canned" or pre-determined, you can't count on being able to re-use topics from year to year) and it requires of the teacher either a deep knowledge of the subject matter being studied, or the courage to admit to students that you don't always have all the answers. As with most truly significant things in life, the risks are higher with this approach, but then so are the rewards.

There's a contemporary philosophy of teaching that has as its central theme the notion of inquiry. The basic idea is that students learn best when they are encouraged to inquire deeply into the subjects they study, and that there's a better chance of them inquiring deeply if they have some choice into what they inquiring about. Within a particular unit of study, students are given wide latitude to research areas of particular interest. For the student this means they get to work on what they want within the bounds of the curriculum set forth by the teacher. For the teacher it means that many students will be working on vastly different projects. Personally, I find this fascinating. I can't stand reading paper after paper on the same topic. But I will admit that it keeps me on my toes. It means that I can't count on doing the same old thing all the time. I have to be ready for just about anything, and I have to be continually using my judgment to make sure things don't get out of hand.

In inquiry teaching, the teacher serves as a facilitator and not as the sole purveyor of knowledge. Students actively seek out the information they want to acquire based on their interests within a give subject area. Teachers provide resources and help them on their way. It's tough to get used to at first. You feel more like a follower than a leader. Teachers are in the habit of being in charge all the time, and students are in the habit of being passive consumers of whatever we put up in front of them, whether it has any particular meaning for them or not. Inquiry teaching doesn't work that way at all. But as more and more teachers see the benefits of this approach, and more and more students are introduced to it, I believe it will come to be the main style of teaching in the 21st Century.

Writing assignments based on this type of approach are probably best illustrated by example. So I'll relate some recent work I did with a high school student.

When I started working with Jordan, he listed the following problems with his writing that he wanted to work on:

Jordan's Problems with Writing

- Despite high grades in most of his subjects, he rarely scored better than a B on research papers or other critical/analytical writing.
- Despite being a quick thinker and a diligent student, writing did not come easily to him; he often spent hours working on a paper ending up with almost nothing.
- While he enjoyed reading and writing in general, he dreaded doing research and writing reports for school.
- He felt that he needed help with organization. He felt that his papers wandered; he lacked focus in his work.
- He never liked his papers or felt proud of them when he was finished.

I asked him to bring me his most recent paper. It was from his U.S. History class. They had finished a unit on western expansion and he had chosen to focus on the Turner Thesis. Here's the introduction to his paper:

The West: A Frontier

"The expansive character of American life... will continually demand a wider field for its exercise," according to Frederick Jackson Turner. From the early 17th century through the end of the 19th century, America expanded primarily from east to west. The colonial settlements, corralled on the west by the seemingly impenetrable Appalachian Mountains, soon gave way to a western expanse of plains stretching more than a thousand miles. When the Midwest had been conquered, the growing nation marched to the Pacific Ocean. The western shore of the continent was reached, but the frontier never slowed. The late 19th century involved numerous imperialistic conquests further to the West, stretching deep into islands of the eastern hemisphere. West was the primary direction of expansion for the nation in the 17th and 18th centuries, bordered on the east by the Atlantic Ocean and Europe beyond. "The true point of view in the history of this nation is not the Atlantic coast, it is the great West," states Turner. "The frontier is the outer edge of the wave—the meeting point between savagery and civilization."

You can see that he's going nowhere fast. There's absolutely nothing original here. All he's done is re-state the obvious and add a couple of quotes from Turner. It's not even clear what he's going to be writing about; the paper has no real focus at all. You can see him repeating himself, just taking up space, in lines like: "West was the primary direction of expansion for the nation in the 17th and 18th centuries,...", and despite some vivid vocabulary there's nothing here that couldn't have been copied right out of an encyclopedia. What's missing is the sense of a writer working to find something out, and wanting to share his findings with his audience. He might as well have said, "Go read Turner." and left it at that. Like so many research papers I read, there's no real thinking here, and I suspect very little learning as a result. In a phrase, this is not research. It is, at best, a good summary of someone else's work.

The first thing I did was to have Jordan score the paper himself using the Six Traits criteria. He gave himself a 5 for Word Choice and 3's and 4's in every other trait except Voice which he

thought was a 1. I told him it was probably a 2 or a 3, and that he was being a bit hard on himself.

After discussing the difficulties he had writing the paper, showing me a couple of other things he had written recently, and relating the difficulties he was experiencing to his mediocre grades, he and I both agreed that his most significant problem was that all of his writing lacked Voice. Because he never wrote about things he cared about in a way that came naturally to him, he never made a personal investment in his work or felt at all comfortable with what he was doing. He just wrote words to get grades. The idea that he might be able to move beyond that, that writing a paper might be a learning experience, or even something enjoyable, had never really occurred to him. As a result, his papers had no focus, and so he found them extremely difficult to write. Without focus he never knew how to begin, he struggled to enumerate vague ideas and to support them with important details, and he could seemingly do no more in his conclusions than simply re-state his ill-conceived and vague introductions. His general intelligence and his agility with language were all that kept him from failing.

When I asked Jordan why he had chosen to write about something for which he had little interest, and about which he had even less to say, he said he didn't really know. He said he was much more interested in geography, in particular the stories of individuals who had made their way to new lives in the West by surmounting incredible geographic obstacles. When I asked him why he didn't write about an individual or a group of people he was interested in, he said that his teacher had talked mostly about the big conceptual issues in American expansion, like the Turner Thesis, and that that's what he thought he should be writing about.

A couple of weeks later, Jordan came in with a new assignment. He had to write another paper and he didn't want to repeat the same mistakes. The unit of study was World War II. I asked him what he was most interested in. He said he enjoyed reading about the Pacific theater. I asked him to be more specific. He said he had read a lot about the American invasion and subsequent occupation of Guam. I asked him what interested him about that. He said he wasn't sure exactly, but that his grandfather had fought and lived on Guam as one of a small group of Americans who, after U.S. forces captured the island in the summer of 1944, spent the next year or so coaxing Japanese soldiers to surrender so that they could be returned to their country. I told him that that was exactly what he should be writing about. Here's what he came up with:

Remote Remembrance

21 July 1994. Twenty-one shots were fired into the air, the traditional volleys of the United States Marine Corps, in commemoration of fallen comrades who sacrificed their lives in one of the bloodiest assaults of World War II in the Pacific theater. It was one of the few contributions by the Americans in this memorial ceremony, and I could not comprehend why the service was so disproportionately representative of Japan. I scanned the assembled crowd, but only periodically noticed an American uniform in the sea of former Japanese troops. I was on the island of Guam, accompanied by my grandfather, at the fiftieth anniversary commemoration of the American invasion of this formerly Japanese-occupied island. This particular service was the American-Japanese joint memorial ceremony, the only event which united the American and Japanese veterans during the entire week. I was confused by the low attendance, having joined many hundreds of veterans at the various memorial services earlier in the week. Standing in the crowd, my reaction was one of embarrassment fueled by an expectation that the low turnout of American veterans represented their inability to overcome racial hatred.

Now that's fresh and original!

He went on in the paper to make a very thoughtful analysis of why Japanese and American veterans had such different feelings about returning to Guam 50 years later, and what that said about the way our two countries viewed World War II. He did some excellent research which involved detailed readings of accounts of the American invasion and subsequent occupation. And

he interviewed his grandfather, who served in Guam, to gain personal insight. In addition to recounting the historical facts, he speculated on the origins of Japanese and American attitudes and cultural differences, and ultimately concluded that the Japanese who stayed in hiding during the year or more after the U.S. invasion, felt a deep connection to the island and to each other because they had actually lived a part of their lives there, as opposed to the Americans who merely did their jobs and left. He then went on to show how his opening scene was like a microcosm of present-day American attitudes, particularly our relative detachment from the actual events of World War II, in comparison to the feelings of those upon whose soil the war was actually fought.

If you're concerned, as some teachers are, that students who write in a more personal style like this never get to the "hard facts" of their subject, check out these two paragraphs from the body of Jordan's paper:

In the early morning of July 21, 1944, the steady naval bombardment of Guam subsided, and a massive assault involving all five branches of the U.S. armed forces swarmed over the reefs of the tiny island. Casualties were high, especially in the 3rd Marine division below the Chonito Cliffs, which was assigned to secure a wide beachhead that was presumed to be weakly fortified. However, the allied naval bombardment was not as effective as predicted, and the reconnaissance efforts did not reveal the extensive fortifications built into the Chonito hillside. Marine 2nd Lieutenant Walter B. Williams, 3rd regiment, 3rd division, remembers the morning vividly, the air hazy from smoke and dust, he and his buddies wading onto the bloody beaches in the front line of the Marine attack wave. The bitter fighting lasted almost three more weeks on the small island, until on August 10 all organized resistance was silenced.

The massive drive to recapture the island was a lengthy effort, though dwarfed by the "mop-up" period which would continue for more than a year against a determined enemy. Guam presented a unique situation in comparison to the other campaigns of the Pacific theater—the Northern region was composed of rugged landscape containing dense jungles and an abundance of caves. In contrast, the Iwo Jima campaign consisted of bitter fighting similar to that on Guam, but once the attack had succeeded, the Japanese were forced to surrender themselves from the small rocky land mass. The environment of Guam was an ideal refuge for the thousands of Japanese troops who refused to surrender. The "mop-up" program had simple objectives: to suppress any threat of enemy resistance, and to remove the enemy from island hide-outs. This was especially important on Guam, which had two major naval seaports, and one of the foremost air bases in the Pacific toward the end of the war. Within a mile of Anderson Air Force Base, from which B-29's flew daily bombing missions over the Imperial homeland, minuscule bands of Japanese forces continually raised havoc and resisted surrender.

Aside from some minor editorial changes, I'd be hard pressed to improve on writing like this. In fact, as I was reading it for the first time after he had turned it in, I found myself a little envious. This isn't just good writing for a high school junior, it's good writing period; there have been plenty of times in my life when I wished I could have written as well. Rather than a hindrance which kept him from getting down to historical details, Jordan's overtly personal stance, his voice, if you will, enabled him to write in a clear and focused way that he had never been able to achieve before in formal academic writing.

What did I do as his teacher? Not much. I know very little about the invasion and occupation of Guam aside from its basic strategic relevance to the U.S. victory in the Pacific—much less, to be sure, than did Jordan. I had vague notions of Japanese soldiers staying in hiding unwilling to surrender long after the initial attack, but I knew nothing of the details, and I told him so. All I could help Jordan with was his method of doing research and organizing his ideas. Of course, that just made him work all that much harder because he essentially had to teach me about what happened there in order for me to make useful recommendations about how to improve his paper. As his teacher for this assignment, here's all that I did:

- I encouraged him to pursue the topic in the first place because he had a personal interest in it.
- I suggested that he formally interview his grandfather as part of his research, and I told him a bit about how to conduct a good interview.
- I suggested that he look for personal accounts of the events that transpired in Guam rather than reading encyclopedic versions.
- I suggested he write the paper from a personal point of view.
- I showed him examples of fine writing in American history (particularly the work of David Halberstam) where the author had written from a personal point of view, and I explained to him that all strong writing has strong voice.
- I told him to write the paper for his friends at school; to write about something that his peers would find interesting in a style they would enjoy.
- I told him not to think about length or worry about where he put his thesis statement or any of the “formalities” of academic prose writing, but merely to let the story tell itself, to follow his inquiries to their logical conclusions, to let his ideas drive his organization.

Every time he got stuck—and he got stuck often primarily because he had never written this way before for a school paper—I told him to follow his interests and not to worry about whether this was a “proper” research paper like the ones he had written in the past. I also told him to think of this more as a magazine article, something he might read in *Time* or *Newsweek*. (That’s really the style and scope of writing that high school students should be shooting for. There’s not much call in real life for the traditional 3-5 page school research paper.) I also encouraged him to submit it to the school newspaper or other student publication.

As you can tell by his engaging style, his active language, his sense of focus, and his riveting detail, he enjoyed writing this paper far more than the previous one. He was also able to write more in less time than he had previously, and to put in more time revising. Most importantly, he was very proud of the result; he thought it was probably the best thing he’d ever written for school. His Six Traits scores went up accordingly, not only in Voice but in the other traits, too. You can tell how much his Sentence Fluency improved, for example. This is 5’s straight across.

Jordan told me that he felt like most of his problems went away with this one assignment. But I don’t think anyone gets that much better that fast. I certainly didn’t teach him very much in the traditional sense. After all, he wrote on a topic about which I knew very little. I don’t think he became a better writer all of a sudden; I think he was a naturally good writer all along who just hadn’t had much good writing instruction. But I do think that by taking an inquiry approach to the assignment, his true talents came to the surface, and he wrote at the level of his abilities, probably for the first time in his life.

For my part, teaching him was a breeze. Granted, I was working one-on-one with this very capable student, but I think it would be a blast to have 25 students of all different abilities doing projects like this. (It would sure be better than having to face 25 papers like “The West: A Frontier”.) I thoroughly enjoyed reading Jordan’s paper. I think I learned as much as he did. And I think the fact that he felt he had something real to offer made him feel better about himself than he had previously. I like to think of what Jordan did as exemplifying the difference between a student and a scholar. A student is someone who passively receives knowledge and learns to parrot it back as efficiently as possible (as Jordan did with in his “Turner Thesis” paper). A scholar actively seeks out knowledge independently, and attempts to go beyond it, to synthesize multiple

perspectives, to formulate original insights, and to apply those insights to new problems. I think that's the best part about inquiry-based teaching and, as untraditional as it is, I think it holds the most promise for helping all students realize their true potential.

When I advise teachers on how to set up writing assignments using this approach, this is the basic framework I start from:

A Possible Approach to Designing and Executing an Inquiry-Style Writing Assignment

- Step 1: Select a unit of study from your curriculum.** Your choice of the curriculum area does not determine your students' projects, it only lays down the parameters from which they choose what to study and how to share their findings with the class.
- Step 2: Present "lessons" on core topics you think are important.** These could be anything from traditional lectures on the subject matter to reading assignments, field trips, special guests, or tips on how to do research.
- Step 3: As the unit progresses, ask each student to select a narrowly focused area of interest that they would like to pursue.** Don't make the fatal mistake of having students choose topics before they've been exposed to the unit. How would they know what they were interested in before you'd gotten them interested in it? Students need help choosing topics that they can handle. In-depth knowledge of a narrower topic is usually of greater value (and interest to an audience) than shallow knowledge of a broad one.
- Step 4: As students choose their topics, ask them to articulate what they would like to find out.** Have students formulate specific questions they would like to be able to answer, and then show them how to focus their efforts toward answering those, and only those, specific questions. This is a good time to introduce models of high quality sample papers written by other students or professional writers.
- Step 5: As students begin their research, ask them to determine what format would be best for the presentation of their information.** Usually some kind of writing presentation will be best, but not always. You may want to limit their choices. Hour long PBS-style documentaries are tough to pull off during a 9-week quarter. You can, of course, limit all students to one format. That will simplify your work, and shouldn't hold students back too much as long as they have opportunities in your class to express themselves in other ways.
- Step 6: Based on their choices of topic and format, have students create criteria for the successful completion of their projects.** You may also have criteria of your own that apply to all projects. You can use the Six Traits criteria for all written work, but you may also want students to create other criteria to assess the form of writing they are doing. For example, the formal criteria for the visual presentation of information in a textbook chapter would be different than for a magazine article.
- Step 7: As more and more of your students identify their areas of interest and the types of projects they plan to pursue, offer mini-lessons that will assist them in the types of research they need to conduct.** Periodically ask the class how they're doing. Make a list of problems people are having and then teach lessons to address those problems specifically.
- Step 8: Have students present their projects to the class either formally or informally.** Sharing their work can be very valuable. In addition to helping authors, it's also great for the audience. Don't forget to share things during the Drafting and Revising stages of the Writing Process. This helps create a sense of community in the class and builds excitement, too. Ultimately, if students do a good job, it's like having 25 teachers in the room. Your teaching is multiplied as students learn about more things than you would possibly have time to teach. This is one of the best ways I know of to move through your curriculum more efficiently.
- Step 9: Have students self-assess their projects based on the criteria.** I like to hand out a grade based on the average of my assessment and theirs using the same criteria. Once students become comfortable with criteria-based teaching and learning, I find that their ability to assess work is almost as good as mine. And because the assessment is less subjective than traditional grading, there are few disagreements about final judgments.

Of course there are a million variations on this basic theme, and I would encourage all teachers to modify it as necessary to suit their particular situations. The basic premise, however,

should not be violated. The main idea is to foster a spirit of inquiry, and to make students take responsibility for their own learning, including its evaluation.

As I've already said, this style of teaching is gaining great favor all across the country and in other parts of the world. In one sense, it's not new at all. Progressive educators as far back as Dewey have advocated for years for this kind of approach. But now we have hard evidence of its value and I think, as time goes by, more teachers will be working this way because it really is a more natural way of teaching and learning than what we have tried in the past.

When I hear someone talk about this style of teaching who has done for it many years, it makes even more sense to me. Here's how Nancie Atwell, in *Coming to Know: Writing to Learn in the Intermediate Grades*, described the work of a group of teachers from Maine who wanted to make this kind of teaching more the rule than the exception:

In designing projects calling for written reports, teachers selected appropriate units for study: the particular areas of their curricula that they felt warranted in-depth investigation. Then, they set aside a block of time—four to eight weeks—for the projects and gave their students time in school to carry out research. They also allowed ownership. Within the unit of study children chose their own topics, genres, audiences, and methods. They gathered information through interviews, books, magazines, site visits, field trips, read-alouds, filmstrips, movies, and guest speakers. And they conferred; they had response. While they were gathering data, drafting and revising their manuscripts, they talked to each other and to their teachers about what they knew and what they wanted to know next. They also received responses from classmates, schoolmates, teachers, siblings, parents, and grandparents who read, saw, or listened to their amazing finished products. Both process and product mattered in writing the reports. Teachers learned to regard report writing as an opportunity for children to lay claim in a formal, permanent way to a body of information that children generated for themselves.

At the same time, teachers understood that children might not automatically apply process approaches to their research, so they required self-selected topics, drafts, conferences, and portfolios. They encouraged students to focus topics—to narrow down to a manageable subject—and then to expand focus to include all relevant aspects of the subject. In talking with students, they used the language of researchers who write: information, organization, validity, references, focus, lead, conclusion, draft, revise, edit. And they helped children understand that the qualities of good writing cut right across the modes. Whatever subject is addressed in a piece of writing, readers want a title that attracts their attention, a lead that captures their interest, specific information presented in a logical, engaging way, clear and graceful language, and conformity with the conventions of spelling and usage. In conferences, and mini-lessons, teachers showed their students what was possible as authors of research.

Nancie Atwell, *Coming to Know: Writing to Learn in the Intermediate Grades*

I think that says it all, don't you?

In reading the second paragraph, I'm particularly struck by how Ms. Atwell's discussion of the attributes of good research writing, and the ways teachers helped students understand them, sound just like a combination of Six Traits, Writing Process, and Writer's Workshop. The more I work with these three tools as a teacher and trainer, the more convinced I am that we're all on the right track.

At the core of these three methods, and virtually all other contemporary teaching philosophies and techniques, is the notion of student responsibility—the idea that it is only when teachers give students responsibility that they begin to accept it. And it is only by accepting responsibility, by taking an active role in their own learning, that students will find themselves on the true path to knowledge, and ultimately, to true success in their adult lives. As hard as it may be for us to conceive of running our classrooms this way, there is more and more evidence accumu-

lating all the time that this is the best way to help students learn.¹¹ Ultimately, it is the only way the majority of our students will learn to educate themselves independent of adult assistance. And creating independent learners is our primary goal.

¹¹ See *Best Practice: New Standards for Teaching and Learning in America's Schools* by Harvey Daniels, Steve Zemelman, and Arthur Hyde, published (of course) by Heinemann.

The “Writing Across the Curriculum” Organizer

★ REAL WORLD WRITING – Help students discover and experience the kinds of writing produced by real professionals in the real world.

SUBJECT: Social Studies	SUBJECT: Science	SUBJECT: Math
PROFESSION: Historian	PROFESSION: Biologist	PROFESSION: Computer Scientist
FORMS: Original research; Annotations for the publication of authentic historical documents; Catalogs of documents; Biographies; Interviews; Documentaries; Letters; Journals; Research grant proposals; Textbooks, Analyses of current events for policy consultations; etc...	FORMS: Lab reports; Descriptions of processes; Observations; Experiments; Letters; Journals; Environmental impact studies; Environmental policy “White Papers”; Research grant proposals; Original research; Magazine articles; Materials requests; Business presentations; etc...	FORMS: Descriptions of mathematical theories; Technical documentation; Descriptions of computer languages; Letters; E-mail; Statistical analyses; Descriptions of algorithms; Project plans; Budget proposals; Business plans; Magazine articles; FAQs; New product ideas; Product specifications; Tutorials, etc...

★ TOPIC EQUATIONS – Help students explore the connections between their interests and your curriculum.

INTERESTS	+	UNIT OF STUDY	=	POSSIBLE TOPICS
Baseball	+	World War II	=	Shutdown of major league baseball; Famous ballplayers who were drafted; Women’s professional leagues; etc...
Movies	+	World War II	=	Propaganda films; Military instructional films; Popular entertainment at home and abroad; Movie stars who served in the war; etc...
Rap Music	+	World War II	=	Popular music of the time; Political music; Urban values and culture; Artists making political statements; etc...
Skateboarding	+	World War II	=	Kids’ recreation during wartime; Home-made toys; Soapbox derby races; etc...
Beanie Babies	+	World War II	=	Kids’ toys; Effects of shortages; Collectibles of the era; etc...

★ ROLE YOUR OWN WRITING – Help students understand and employ the essential components of any piece of writing.

ROLE	FORMAT	AUDIENCE	PURPOSE	APPROACH
Choose one or possibly two. Most assignments will have one.	Choose one only. In rare cases, combining formats might make sense.	Choose one or more. If more than one, pick a main audience.	Choose one or more. If more than one, pick a main purpose.	Choose several. Some pieces may require varied approaches.
The student takes on a role and writes from this perspective:	The final version must be published in this format:	This is the student’s intended audience:	This is why the student is writing this piece:	This is how the writer will achieve his or her purpose:
Artist; Biographer; Biologist; Curator; Detective; Elected official; Historian; Expert in ...; Newscaster; Panelist; Parent; Political candidate; Product designer; Reporter; Self; Teacher; Tour guide; etc...	Biography; Booklet; Brochure; Diary; Editorial; Fairy tale; Interview; Journal; Letter; Magazine article; Manual; Myth; Newspaper article; Novel; Play; Poem; Report; Short story; Textbook chapter; etc...	Friends; General public; Judge; Jury member; Parent; People from other cultures or time periods; Professionals in same discipline; Public figures; School board members; Supervisor; Young children; etc...	Change action; Change thinking; Describe; Encourage; Entertain; Explain; Inform; Initiate action; Initiate thinking; Instruct; Persuade; Prevent; Tell a story; etc...	Analyze; Challenge; Classify; Compare; Conclude; Contrast; Defend; Define; Demonstrate; Evaluate; Interpret; Justify; Predict; Propose; Question; Reflect; etc...

★ ROLE YOUR OWN WRITING – Sample assignments generated with this approach.

CONTENT AREA	ASSIGNMENT
Social Studies	You are a newspaper reporter from the Atlanta Constitution covering the battle of Gettysburg. You have followed the battle and have now just listened to Lincoln’s Gettysburg Address. Write a newspaper article for the people of Atlanta that will inform them of the results of the battle and its impact on the Confederate war effort. Describe the battle and its aftermath. Analyze the balance of power between the two sides as a result of the battle. Reflect on the sentiments of Unionists and Confederates before and after Lincoln’s speech.
Science	You are a biologist hired as a consultant to The Nature Conservancy. Create a brochure for the general public that explains the Greenhouse Effect and its impact on worldwide climatic conditions. Analyze current data on the effects of greenhouse gases and predict the consequences of widespread global warming. Propose alternatives to improve the situation that are consistent with current positions held by your client.
Math	You are an expert in fractions . Create a chapter for a textbook to be used by 4th grade students that will instruct them in adding, subtracting, multiplying, and dividing fractions. Include an introduction that justifies the instructional method you choose.

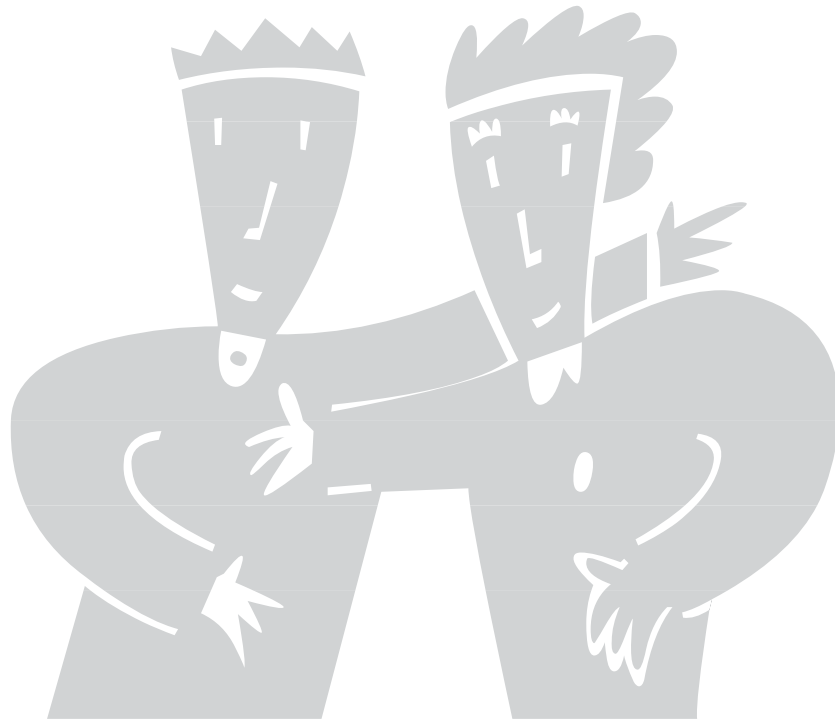
★ MASTERING THE MODES – Help students unlock the power of the traditional modes of argument.

	NARRATIVE	EXPOSITORY	PERSUASIVE	DESCRIPTIVE
KEY TRAIT	Organization	Ideas	Voice	Ideas/Word Choice
KEY QUESTION	Why tell a story?	Why does this need explaining?	Why should the reader trust you?	Why is this worth describing?
BEST AUDIENCE	Supporters; Promoters	Controllers; Analyzers	Promoters; Analyzers	Supporters; Analyzers
BEST STRATEGY	Transition-Action-Details	What-Why-How	What-Why-How	Idea-Details; Tell-Show
ADVANTAGES	Entertaining; Subtle	Direct; Respectful; Most efficient mode	Most powerful mode; Most important mode	Captivating; Emotional
DISADVANTAGES	Slow; Inefficient; Reader has to “get it”	Can be dry; Audience-dependent	Most likely to offend; Writer is very exposed	Least direct; Easily overdone

★ RESEARCH PLANNING – Help students determine key questions, clarify focused intent, and select appropriate research strategies.

WHAT do you want to know?	WHY do you want to know it?*	HOW are you going to find it?
What kinds of spiders are poisonous?	So I can tell people which kinds of spiders to watch out for.	Insect reference book; CD-ROM encyclopedia
What’s the average temperature in my town this time of year?	I want to know when to plant my vegetables.	Almanac; Internet; Interview a local gardener; Call the newspaper
How do you put a computer together?	I want to make my own computer.	Computer repair book; Interview a repair person

*Students want to know about some things merely because they’re curious. In these cases, I ask them what they’re curious about. This usually generates another small set of more specific questions.



Let's work together to
make your teaching
the best it can be.

Please contact me any time!

Even the best workshops and teaching materials can't meet the needs of every teacher all the time.

That's why we need to stay in touch. Send me an e-mail any time you have a question.

*I'll do my best to get back to you quickly with answers, additional teaching materials,
or other resources.*

Please send suggestions, questions, and corrections to:
stevepeha@ttms.org

Learning Patterns

Teach Smarter Not Harder

Imagine a structure 13 years tall, 180 days wide, and five subjects deep. This is a K-12 education. Each cell in this structure represents a single class period in a single subject for a total of 11,700 educational opportunities.

By using *Teaching That Makes Sense® Learning Patterns™* we can reduce this academic load for students, simplify planning and instruction for teachers, and help more kids learn more things in less time and with less teacher effort.

Learning Patterns are cross-curricular tools optimized for successful teaching in any subject or grade. They are designed to be used, re-used, and shared across classrooms without requiring extensive training or preparation.

By analyzing standards documents and the methods of effective teachers, *Teaching That Makes Sense* has identified underlying commonalities in learning targets across the curriculum. These commonalities represent dozens of potential assignments that can be taught and learned through a small set of foundational skills.

Consider exposition. Students consume and create expository information in many ways: they read expository texts, write expository essays, create reports, answer test questions, etc. As varied as expository expression is, it has a simple underlying structure that can be explained by a single *Learning Pattern*.

Some *Learning Patterns* cover skills like narration, exposition, and persuasion. Others help teachers and students with things like assessment, reading comprehension, and memorization. The same patterns can be used across grade levels and subject areas as well, so kids take their learning with them as they grow.

For more information about Learning Patterns click [here](#).



“Learning begins with teaching that makes sense.”

Agile Transformation

Building Collective Capacity for School-Wide Change

We are discovering better ways of improving schools by doing it and by helping others do it. Through this work, we have come to value:

- **People.** *Individuals and interactions* over policy and politics;
- **Achievement.** *Maximum potential* over minimum competence;
- **Courage.** *Fierce collaboration* over comfortable compromise;
- **Agility.** *Responding to change* over following a plan.

The items on the right are important, but we value the items on the left more.

Agile Transformation is grounded in two principles: **(1)** People are more successful when they enjoy their work; and **(2)** Schools are more successful when they support people in developing the autonomy, competence, and relatedness that makes their work more enjoyable. Features of *Agile Transformation* include:

- **Paired Practice.** Nobody works alone. Everyone has a team and a teammate.
- **Rapid Iteration.** Sprint through big problems one small problem at a time.
- **Making Sense.** What do we do? Why do we do it? How do we know it works?
- **“Stand Up” Sessions.** What did you do yesterday? What are you doing today? What do you need to be successful? Agile leaders remove impediments.
- **Successful Failure.** Fail fast, fail smart. No blame games. Apply what you learn as you move closer to your goal with each iteration.
- **Souls and Roles.** Aligning what we do with who we are.
- **“Just in Time” Solutions.** Handle problems as they arise. Respond as needed.



“Learning begins with teaching that makes sense.”

Essential Elements of Agile Schools

The Qualities of Effective Educational Communities

1. **Agile schools work because people choose to make them work.** We believe in freedom of choice, and that making the choice to participate fully in teaching, learning, and leading is the most important choice we can make.
2. **Agile schools love to learn.** We believe that learning is inherently enjoyable and that giving learners a responsible degree of autonomy in their individual pursuit of knowledge and skill makes it even more so. Agile educators are learners, too.
3. **Agile schools take a constructive approach to failure.** We believe failure is a normal part of success. Kids struggle to learn. Teachers struggle to teach. Administrators struggle to lead. We all experience failure on the way to solving new problems. The faster we fail, the more solutions we try. The smarter we fail, the more knowledge we bring to the next iteration. Instead of looking back at problems, Agile schools look forward to solving them.
4. **Agile schools are always getting better.** We believe there's almost always a better way of doing something, and that it's almost always worthwhile trying to figure out what that better way is. Agile schools value progress, and the appropriate measurement thereof, because progress is the true indicator of learning.
5. **Agile schools empower people to empower others.** We believe that individuals—not systems or policies—are the true sources of power in our schools. Our responsibility is to use our power in service of the greater good, and to teach students how to use their power that way, too.
6. **Agile schools achieve extraordinary results.** We believe in transformative learning that goes far beyond incremental improvements in test scores. Adults in Agile schools also strive for extraordinary achievement in their profession as well.



“Learning begins with teaching that makes sense.”

Essential Elements

continued...

7. **Agile schools are based on deeply-held beliefs, clearly-articulated values, and a firmly-rooted sense of commitment.** We believe that the most successful schools are those run by people who know what matters most to them and who possess an unshakable determination to get it.
8. **Agile schools are communities where people make a difference and connect with something greater than themselves.** We believe that the drive to contribute is part of human nature. Our role is to guide people in directing their contribution toward its highest and best use.
9. **Agile schools value ownership, positive attitudes, high expectations, and unwavering optimism.** We believe that making a good life is about making good choices, that the pursuit of happiness is an inalienable right, and that self-mastery is the key to its rightful exercise.
10. **Agile schools embrace the risk inherent in the achievement of great things.** We educate for maximum potential not minimum competence. We believe that all learners have within them extraordinary strengths and untapped resources, and that learning is only limited by our willingness to attempt what has never before been attempted. We welcome change, we innovate, and we seek out challenges that organize and measure the best of our energies and skills.
11. **Agile schools affirm self-knowledge as the most valuable knowledge and self-determination as the most basic right.** We believe that introspection, self-disclosure, and intellectual honesty are essential to personal transformation. We seek to support young people in becoming the adults they want to be.
12. **Agile schools are communities where no one is above the rules, everyone has a voice, freedom is sacred, equity and excellence are not mutually exclusive, and the highest goal of education is contributing to the present and future well-being of individuals who can thrive independently in a modern democracy.** Agile schools value college preparation, career fulfillment, and engaged citizenship, but we value something else even more. Collegiate, career, and civic achievement are important, but they are means to ends, not ends in themselves. Human happiness, meaningful contribution, and sustained well-being of self and community are the ultimate ends to which Agile schools aspire on behalf of the children and families we serve.



“Learning begins with teaching that makes sense.”

TEACHING THAT MAKES SENSE



“Learning begins with teaching that makes sense.”